Final Notes May 15, 1997

IMPLEMENTATION TEAM/PLAN FOR ANALYZING AND TESTING HYPOTHESES (PATH) MEETING NOTES

April 2, 1997, 9:00 a.m.-1 p.m.
NATIONAL MARINE FISHERIES SERVICE OFFICES
PORTLAND, OREGON

I. Greeting and Introductions.

The April 2 meeting of the IT/PATH Group, held at the National Marine Fisheries Service's offices in Portland, Oregon, was co-chaired by Donna Darm of NMFS and Dave Marmorek of PATH. The agenda for the April 2 meeting is attached as Enclosure A. The following is a distillation (not a verbatim transcript) of items discussed at the meeting, together with actions taken on those items.

I. Status of "Project Management Group."

This group had a long and very worthwhile conference call last week, said Ed Sheets. We talked about the general direction of the PATH work and the schedule for its completion. In the course of this discussion, we figured out a way to accelerate some of the hydroregulation work to provide some early hydroregulation runs for testing in the PATH model. As most of you are aware, there are always bugs in the first few model runs, and if we can at least provide some preliminary numbers from the Corps' hydroregulation models, that will allow the PATH modelers to iron out some of those bugs, Sheets said.

It's good that this conversation took place, he continued, because the schedule the Corps was originally on to do the hydroregulation didn't really fit in with the schedule PATH is on to do its prospective analysis for spring/summer chinook. We had hoped to have a chart showing how precisely the Corps process and the PATH process are now meshing, but after receiving a fax from the Corps yesterday, it wasn't possible to provide that chart.

The group spent a few minutes going through Enclosure C, the Snake River Feasibility Study Summary Schedule dated April 1, 1997. I should point out that this is only a summary schedule, said COE's Greg Graham -- there is also a detailed schedule, showing the interconnections between hundreds of individual tasks. On the summary schedule, some of the key milestones include:

-- Develop alternatives for analysis by April, 1997
-- Finish hydroregs by August, 1997
-- Draft Environmental Impact Statement available for regional review by April 1999
-- Final EIS finished by December

The bottom line is, this is a schedule that will allow us to make the drawdown/no drawdown decision in 1999, Graham said.

Right now, the critical thing on the detailed schedule is the economic analysis, said Graham.

That's what's really driving us at the moment. However, once we get a little deeper into the Snake River Feasibility Study, I have a feeling that the anadromous fish evaluations will really start to play a significant part in the critical path. There are going to be a lot of discussions from here on out with PATH about what they're going to provide and when they're going to provide it. Sheets agreed with this assessment.

The hydroregs are the starting point for a lot of the analysis that needs to happen, Graham said. We're working on those hydroregs even as we speak; a hydroreg workgroup has been established to develop the specifications for the hydroreg runs, and they have a meeting today. Some of those specs have already been developed; the plan is to have all of the specs for all of the alternatives under consideration completed by the end of this month. Once those specs are developed, they will be sent to PATH and to the economic workgroup for review, Graham said. If other entities would like a chance to review the specifications, he added, please contact me.

The next task is to do the base case run, Graham continued. The base case is really the most critical run, because all subsequent runs rely on the accuracy of the base case. We're scheduled to complete that base case run by May 16, 1997; the PATH group would like to have that information sooner, so we're looking at ways to speed that process up. We're scheduled to finish all of the hydroreg runs -- Groups A, B and C -- by the end of August, but again, we're trying to speed that schedule up if we can, Graham said.

The conflict, as I understand it, is that PATH would like to start running some of the passage work in May, which means that some hydroregs are needed in April, said Sheets. PATH is trying to complete its decision analysis for spring/summer chinook by September 30; that won't be possible if some of the runs aren't received until the end of August. Obviously anything the Corps can do to speed up its overall hydroreg development schedule would be helpful, but if at least some numbers were available in April, then PATH could start testing the model. In terms of specifics, we've talked about having the Corps focus on getting A1 and C1 out as quickly as possible, Sheets said -- those two runs will provide a significant range of conditions, and in terms of exercising the model and finding bugs, would probably be helpful. In response to a question, Sheets explained that A1 is the base case, while C1 is full drawdown.

Howard Schaller took issue with the idea that analysis of the two extremes would provide much useful information -- we've done that before, he said, and it just doesn't yield a lot of good information. It's the scenarios in the middle that are sometimes more important. We have a lot of work to do in developing the necessary methodologies to do this prospective analyses, Schaller said. We have to integrate the hydro models, the prospective models... if the Corps can feed its hydroreg runs to us one at a time, we won't have to hold things up quite as much as we seem to be implying.

We are doing our best to speed the process up, Graham replied, and we do intend to feed the runs to you as they're developed. One thing I might propose is, we do have one run completed -- the 1996 refill run, which closely mirrors the objectives of NMFS's 1995 Biological Opinion. We could provide that to PATH in whatever format is appropriate, if you want to break down your model and see how it's working.

After some minutes of further discussion, it was agreed that it would be appropriate to ask PATH to include short-term impacts, such as the biological effects of dam removal, in its anadromous

fish analysis; Graham said COE could provide PATH with some additional resources to help accomplish this work if needed. Although I'm reluctant to saddle PATH with any additional work, said Darm, expanding the scope of the anadromous fish analysis to include these other parameters would be consistent with some of the discussions we've had in the American Rivers v. NMFS settlement talks -- NMFS has expressed a willingness to bring any of the scientific information we used in making our jeopardy determinations to the PATH group to review and analyze. Certainly short-term impacts aren't typically factored into the models, but do need to be factored into the ultimate decision.

It probably would be reasonable to ask the PATH group to take a look at some of those short-term impacts, such as, what kind of a historical record do we have on the biological impacts of dam removal? agreed Schaller. The Corps could probably help us analyze things like the effects of sediment, he said.

The IT/PATH group spent a few minutes discussing the appropriate degree to which PATH's technical workgroup should be asked to function as a clearinghouse for the review of the information that will be used to develop the Anadromous Fish Effects Analysis. Tony Nigro suggested that IT/PATH might be the appropriate entity to serve as liaison between all of the various groups working on pieces of the Anadromous Fish Effects Analysis.

Why don't we simply recognize the fact that there needs to be very close coordination between the Lower Snake River Feasibility Study and the Anadromous Fish Effects Analysis, but we still need to work out exactly how this will be accomplished, suggested Marmorek. I suggest that we try not to get sidetracked, but focus instead on the substantive questions facing PATH.

I agree, said Darm. However, I think we need to recognize the fact that, no matter how we make it work, what the principals have been discussing in recent weeks is going to represent a substantial increase in the work load of the PATH workgroup, and an increase in the scope of their activities.

The group discussed some of the details of the engineering appendix of the Lower Snake Feasibility Study. One of Oregon's concerns is that we not leave plans and specs until the last minute, said Nigro -- if plans and specs can be done as part of the drawdown engineering appendix, that will buy us a goodly chunk of time. The only real concern there is, if the decision is made not to do drawdown, then we will have spent some money that we didn't need to, Graham replied. However, that's something we can discuss further as a group. As you say, if plans and specs were completed ahead of time, it might save us a year on the implementation schedule.

The discussion moved on to the mechanics of the COE and Congressional appropriations cycle, and the need to meet the appropriate deadlines so that funding for whatever recovery path is chosen is available as soon as possible after the 1999 decision is made. Congress works on a two-year appropriations cycle; an operation recommended in January 2000 might not receive funding until January 2002. After that, it would be five years before that operation was fully implemented, Graham observed.

If we were to be extremely proactive, and request the necessary implementation funding for inclusion in the Administration's 2000 budget, when would a decision need to be made? asked

Sheets. Is the question really how we can shorten this schedule? asked Darm. I just want to be sure that everyone understands that, if we follow the track we're on right now, with the 1999 decision, it will probably be 2002 before funding is actually appropriated, Sheets said. I think it would be worthwhile discussing what it will take to get this project funded by 2001 or even 2000.
One question related to the schedule, said Darm -- what is a Real Estate Evaluation Report? When you draw a reservoir down, you're going to wind up with something like 30,000-40,000 acres of mud flats, Graham replied. What do you do with that acreage? Do you turn it into a Federal refuge, do you sell it, or what? Obviously, he said, some analysis needs to be done.

Returning to his previous point, Sheets observed that, since there is no way to know how long Congress will take to make its funding decision, it would probably be worth the IT/PATH team's while to look at ways to shorten its own schedule to the greatest extent possible -- we don't want to discover, when we make the 1999 decision, that we have missed the submittal deadline for the 2000 budget by a few weeks, such that we have to wait for the 2001 budget process, he said. We need to plan ahead with as much accuracy as we can, in other words.

Sheets asked Graham to supply the IT/PATH group with a brief description of the internal milestones in the Corps' annual budgetary process; Graham agreed to do so at a future meeting.
One other concern I have, Graham said -- once the draft EIS hits the street in April 1999, what is the process for regional review? How will all of the agencies and interested parties work their way through the EIS and make a final drawdown/transportation decision? That, in and of itself, could be quite a lengthy process. We don't know the answer at this point, Darm replied. It would be nice if we could figure out how to make it work before we get to that point.

What about coordination between the engineering and design side of things and the fish, wildlife and socioeconomic analyses? asked Marmorek. Are there adequate links between the two sides in your more detailed schedule? There is a lot of coordination built into this process, Graham replied -- for example, we're going to start having periodic roundtable meetings, where we discuss engineering issues, economics, real estate, cultural resources, and any other topic related to the Snake River Feasibility Study. We're hoping that participants in the PATH, SCT, IT and other processes attend, he said -- we want to encourage the broadest possible participation in the study development process. In response to a question, Sheets said he and Graham would provide further updates as the schedule for this effort continues to firm up.

To summarize upcoming actions, Sheets said that he and Graham would be meeting with Marmorek and anyone else who wants to provide input on schedule later this afternoon. Our ultimate goal, Sheets said, is to bring a chart showing how all phases of this effort fit smoothly together to the next IT/PATH meeting. However, we're not quite there yet, he said. We spent some time this morning talking about how this process can be speeded up such that we can meet a year-2000 implementation schedule, said WDFW's Tom Cooney -- how will that be followed up on? The first step is to find out what the internal milestones are for the Corps/Administration appropriations schedule, said Sheets. We'll bring that back to IT/PATH, at which point we can discuss what is feasible in more detail.

III. Status of "Hydro Reg Group."

There is nothing to report on the activities of this group, said Toole, other than the fact that they're meeting even as we speak.

IV. and VI. : Status of PATH Tasks, Focusing on Prospective Analysis Tasks, and Discussion of Options for Incorporating Hatchery, Harvest and Habitat Management Actions Into the Prospective Analysis.

Marmorek distributed Enclosure D, a document, dated April 2, outlining peer review issues (summarized in Agenda Item 5) and tasks/schedule for PATH's decision analysis of spring/summer chinook. He provided an overview of the contents of this document, which lays out the tasks necessary to conduct decision analyses of hydro, habitat and hatchery management actions in the course of completing all decision analyses for spring/summer chinook by October 1997 (please see Enclosure D, pp. 3-12 for details of Marmorek's presentation). Marmorek added that this task list and proposed schedule have not yet been reviewed by the entire PATH group, but will be reviewed at the next PATH workshop on April 22-24, 1997.

Marmorek went through the actions associated with the hydro, habitat and hatchery decision analyses. One general point about the habitat section of this outline, he said -- what are the habitat actions? PATH would like some confirmation from the IT that PATH's responsibility is to develop methods for dealing with the Four Hs, while the IT's responsibility is to specify the actions associated with each of those Hs. Since the decision has been made that the Regional Forum in general, and the Implementation Team in particular, deal only with Hydro and not with the other three Hs, it's probably not the IT, Darm replied. Perhaps NMFS is a likely candidate, or
NMFS in consultation with the anadromous fish managers.

Someone -- preferably an existing group -- is going to have to lay out this work product, observed Lothrop. That group should probably have a state, tribal and federal presence. Has some of this work already been done in the course of developing the inputs used in the life-cycle models for the Idaho v. NMFS analyses? asked Darm. Maybe we don't have to start from scratch.
Since we already have a PATH habitat group configured and working, perhaps it would be appropriate to ask them to describe a set of alternative management actions that capture the range of available options, then run those through an existing process, suggested Nigro. But who would they report to? asked Marmorek. Possibly to the anadromous fish managers, Lothrop suggested. NMFS also has the ability to provide some direction on actions that would take place on Federal lands, Darm added. After some minutes of further discussion, it was agreed to ask the PATH Habitat workgroup to take a first crack at defining the range of habitat restoration and protection actions available to the region, then ask the anadromous fish managers and CBFWA to review this work product.

The discussion moved on to the hatchery decision analysis portion of Enclosure D. Marmorek explained that the hatchery analysis is not currently as well-developed as the habitat or hydro sections of this task, mainly due to the difficulty in finding appropriate data. Major data gaps include the lack of empirical information on broodstock programs and on steelhead production.

Again the question arises: to whom should the PATH hatchery workgroup look to for guidance

in developing the sideboards for this analysis? asked Marmorek. Should we be working with the anadromous fish managers and CBFWA again? I think so, replied Lothrop. One thing I think the prospective analysis for hatcheries needs to reflect is the range of impacts hatcheries have on the overall recovery effort, said Cooney -- we've spent a lot of time discussing the impact of past hatchery practices on the current status of stocks, but there are also major questions to be answered about supplementation with captive broodstocks, as well as the use of core populations for supplementation outside their native subbasins. Somehow, these questions need to be reflected in the hatchery prospective analysis, Cooney said. After some minutes of discussion, it was agreed that PATH's hatchery subgroup will work with the anadromous fish managers and CBFWA to develop the hatchery analysis.

Marmorek moved on to the schedule for this effort, reiterating that the hydro, habitat and hatchery decision analyses for spring/summer chinook are all scheduled to be completed by the end of FY'97. The ongoing retrospective analysis on fall chinook will feed into a draft decision analysis on that species by the spring of 1998. The decision analyses for all three species -- spring/summer chinook, fall chinook and steelhead -- are scheduled for completion by October 1998.

And what, to be clear, will this exercise ultimately yield? asked Darm. A ranking of the alternative management actions with respect to various performance measures -- probability of survival, probability of recovery and other qualitative measurements, Marmorek replied. In other
words, the PATH workgroup will be making their best professional judgement about what stock performance is likely to be under the various alternative scenarios? asked Darm. That's one of the outputs, Marmorek said -- we're still working with the IT to determine what you'd like us to do, vs. what you would like to do yourselves.

V. Discussion of PATH Peer Review Process.

Marmorek led a lengthy discussion of the status of this process. At the last IT/PATH subgroup meeting, he began, we were asked to lay out what kinds of questions, related to PATH, will require peer review, as well as what PATH peer review processes are currently in place and what alternative peer review processes might be available to PATH. The result of that work assignment is summarized in the first part of Enclosure D (see this document for details of Marmorek's presentation, and the mechanics of the PATH peer review process).

Ideally, said Darm, the information, recommendations, projections and analysis produced by the PATH group will be such that NMFS can simply agree that this is the best use of the best available science, and here's what we think will happen under each of the 1999 decision scenarios. However, it is equally possible that PATH's ultimate work product will need to be integrated with other decision factors. However, whatever we come out with in the end will have to be reviewed, said Darm. If we're going to make a recommendation of this magnitude, and go to Congress and ask for half a billion dollars, the region is going to have to be pretty solidly in agreement that this, indeed, is what the best available science tells us to do.

Certainly it's critical that this entire process have a credible peer review mechanism built in, agreed Nigro. I'm just wrestling with what, exactly, that credible peer review process should

consist of, and who should do it. We can either ask the PATH group and/or the Scientific Review Panel to note and fix any gaps, or we can ask the Independent Scientific Advisory Board to take it on, despite the fact that the ISAB's plate is already pretty full.

Lothrop suggested that it would be most appropriate to complete all layers of the peer review process before NMFS makes its final recommendation. It would be especially tragic if, when the time comes for the policy folks to make the 1999 decision, we discover that they don't understand or appreciate what the PATH process is, he said. I think everybody has heard about PATH, but nobody understands it or goes to the briefings, said Darm.

What we need to decide, first, is, is the existing peer review process adequate, and second, looking forward to the end, what is the best way to ensure that the best scientific minds have had an opportunity to contribute to the products we generate, said Marmorek. And we have sought out many of those minds to participate in the various PATH workgroups. The way PATH is structured, there is one group of scientists that operates at arm's length, is not involved in any of the tasks themselves, but reviews the ultimate work products and judges their merits. Then we have a second group of independent scientists who roll up their sleeves and challenge everyone at
our meetings. And that has been very useful, said Howard Schaller.

The question of the adequacy of the current review process is still somewhat troubling, said Darm, because while it may be scientifically adequate, I'm not hearing at this point that it is politically adequate. While the Scientific Review Panel may be functionally up to the task of providing an independent peer review, in terms of political perceptions around the region, it probably doesn't have the credibility that the ISAB has. Certainly, based on the way the ISAB has functioned to date, it should be possible to draw a bright line between the ISAB group conducting the PATH peer review, and any ISAB members who may have actively participated in the PATH process, said Nigro. In response to a question, Marmorek clarified the degree to which ISAB and PATH have interacted to date by saying that various ISAB members have participated in PATH meetings and have commented on PATH work products, but have never been co-authors.

The problem is, if the ISAB has already participated in PATH, then the ISAB has already been tainted, said Schaller. Perhaps what we need to consider is, what is it about the SRP that makes it less than a blue-ribbon panel of experts, and is there something we can do to make it a blue ribbon panel? Or, if both groups are indeed tainted and Congress is eventually going to ask the National Research Council to appoint another panel anyway, maybe we should beat them to it, said Sheets -- we could recognize that such a panel needs to be convened, and tell Congress when, where and, perhaps, who. I think we need to recognize that, depending on which way the political winds are blowing, no matter what kind of a peer review process has come before, Congress may still order additional review before making its decision, said Schaller -- how that will fall out is simply impossible to predict right now.

I don't see the ISAB as tainted because of their previous participation, said Darm. Also, I don't agree that whatever peer review process is ultimately chosen has to take place before NMFS makes its final recommendation. One thing we can do immediately, said Tom Cooney, is totally separate out the reports from the SRP, and profile their independence. Personally, I would be hard-pressed to identify a bluer-ribbon panel than the SRP, with respect to modeling and an

ability to take a broad view of the issues. I think we should be letting people know that there is already a very high-profile review group that is in fact independent -- it may not solve all of these
problems, but the SRP shouldn't just be ignored.

I tend to agree with both Howard and Tom, said Darm. Congress or the Endangered Species Committee will almost certainly ask for some further review of whatever NMFS comes up with; the real question we need to consider is, do each of the sovereigns participating in this coordination think that the PATH review process is adequate? And in terms of Tom's point, my concern about the interrelationship between PATH and the SRP is the fact that it is very model-centric. I'm not sure that there is adequate recognition within those two bodies of the inherent limitations of modelling. Actually, you should read the SRP's reviews, because that's their main comment, said Schaller. The point is, people need to read what the SRP has produced before they make a blanket condemnation, said Cooney.

After some minutes of further discussion, the group identified the following points of information which need to be developed further before a decision on the adequacy of the PATH peer review process can be made. First, said Sheets, we need some more discussion with this IT/PATH subcommittee about exactly what skill mix the ISAB, or a subset of ISAB, could provide to the peer review process. Second, we need to find out whether the NRC or others might be able to provide to outline the ideal blue ribbon peer review panel, so that such a group could be empaneled in a timely fashion.

Cooney summarized further, identifying three main tasks to be undertaken under the peer review umbrella:

1) Independent review of PATH work products
2) Coordination with ISAB to ensure that the key concepts in the "Return to the River" report are incorporated, to the greatest extent possible, into the PATH modeling and decision analysis
3) Ensure access to specific areas of scientific expertise within the ISAB as needed by PATH, without compromising ISAB's peer review credibility.

With that, the meeting was adjourned. Meeting notes prepared by Jeff Kuechle, BPA contractor.